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EXPERIMENTAL STUDY OF NOISE LEVELS GENERATED BY ROLLING BEARINGS IN DIFFERENT STAGES OF DETERIORATION

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Abstract

Rolling bearings are one of the most commonly mechanical elements used in the construction of dynamic equipment. This element can be considered as a noise source as a result of relative motion of the components from their construction: rings, rolling elements and cage. The noise level increases with the increase of the roller bearings wear. By analyzing the roller bearings wear level, which appears due to the component failure, it can be determined the deterioration stage and their remaining lifetime with direct implication to optimal replacement and reduced of the negative aspect: noise pollution, materials and energy consumption, waste quantities. This paper presents an experimental study on the increase of noise level generated by rolling bearings ZKL 1205K in different deterioration stages.

Key words: deterioration stages, diagnosis, noise, prediction, rolling bearings

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